

**Hardware River Water Quality Improvement Plan**  
First Community Meeting: Victory Hall, Scottsville VA  
March 31, 2015

***PARTICIPANTS***

Jack and Ruth Witt	Tom Pratley (TJSWCD)	Judith and Carl Ogborne
Connor Dunwoody	George Cushnie	Carol Owen
Claudia Goin	Eugene Goin	Mary E. Carlile
Roger Black	Jim Bonner	Victoria Smith
Bebe	Lisa DeBritto	Dorothy Bunyon
Brian Walton (TJSWCD)	Luke Longanecker (TJSWCD)	Calvin Johnson
Tara Sieber (VADEQ)	Nesha McRae (VADEQ)	

***MEETING SUMMARY***

The meeting began with a welcome from Tom Pratley, Thomas Jefferson Soil and Water Conservation District (TJSWCD) Director for Fluvanna County. Mr. Pratley shared information on the work that the TJSWCD has completed in the Hardware River watershed in recent years, primarily in working with local farmers to exclude livestock from the river and its tributaries. Mr. Pratley provided an overview of the TMDL process and explained how the TJSWCD can provide support to landowners interested in implementing best management practices (BMPs). He also introduced two staff members, Luke Longanecker and Brian Walton who were present in order to answer questions about agricultural and residential cost share programs.

Nesha McRae, from the Virginia Department of Environmental Quality (VADEQ) provided an overview of the water quality problems observed in the Hardware River. Monitoring conducted by VADEQ has shown that the river (both the North Fork and the mainstem, also referred to as the Lower Hardware River) are violating the state's water quality standard for *E. coli*, which Nesha explained is a human health concern when people have primary contact with the water. A TMDL study was completed for the Hardware River in 2007. The results of this study were shared with attendees including a "de-listing" reduction scenario and a "0% violation" scenario. Nesha explained that as part of the study, an assessment of all of the sources of *E. coli* in the watershed was completed, and then reduction scenarios were developed for the different sources outlining what would be needed in order to meet the water quality standard. It was explained that while direct deposition of bacteria into the creeks by wildlife is a significant source in the watershed, it will not be addressed in the water quality improvement plan, which will be designed to address those sources linked to humans (either directly or through land management practices). Nesha outlined the process that will be used to develop the water quality improvement plan and stressed the importance of public involvement. Implementation of the plan will be conducted on a voluntary basis, so local support is very critical to the overall success of this effort.

Several participants in the meeting posed questions about water quality in the Hardware River and its tributaries. A summary of the results of VADEQ's water quality monitoring data was shared with attendees along with a map showing the locations of both VADEQ and volunteer monitoring stations.

One participant asked just how bad things were in the watersheds. Nesha explained that the streams were violating the water quality standard somewhere between 20-30% of the time on average, except for out the mouth of the river where violations are much less frequent. One participant asked why then was the segment from the mouth upstream to the next monitoring station shown as impaired on the watershed maps shared in the presentation. It was explained that these designations are based on which assessment units stream segments fall within. The participant responded that this segment really should not be listed as impaired since the drainage area is largely forested and much of the subwatershed is a wildlife management area. Nesha offered to follow up on this issue with the water quality assessor at VADEQ's Valley Regional Office.

The group dismissed for a five minute break after which attendees reconvened in two break out sessions: an agricultural and a residential working group.

**Hardware River Water Quality Improvement Plan**  
Agricultural Working Group Meeting: Victory Hall, Scottsville VA  
March 31, 2015

***PARTICIPANTS***

Connor Dunwoody  
Brian Walton (TJSWCD)  
Claudia Goin

Tom Pratley (TJSWCD)  
Luke Longanecker (TJSWCD)  
Victoria Smith

Judith and Carl Ogborne  
Calvin Johnson  
Nesha McRae (VADEQ)

***MEETING SUMMARY***

Nesha McRae, from the Virginia Department of Environmental Quality (VADEQ) provided an overview of the role of the agricultural working group in the planning process. She explained that the group is typically made up of local farmers, Soil and Water Conservation District and Natural Resources Conservation District staff, along with representatives from other organizations that work in agricultural conservation in the region. The group moved on to discuss the general status of agriculture in the Hardware River watershed today. It was agreed that there has been a general decrease in livestock numbers in the region since the original TMDL study for the river was completed in 2007. One participant noted that there have been some larger groups coming in from the east coast to lease land to grow wheat, soybeans and corn. Much of this land used to be grazed. Several participants expressed concerns about biosolids applications in the watershed. Nesha explained that while there are several permits that have been issued to landowners in the watershed to apply biosolids, this is generally not a concern with respect to *E. coli* concentrations in the stream. This is due to the restrictive requirements regarding treatment and application of biosolids. Nesha asked the group about the ratio of pasture, hayland and fallow pasture in the watershed, explaining that it will be important to know how much pasture is actually grazed in the watershed when identifying suitable BMPs for implementation including livestock exclusion fencing. One participant explained that for his operation, around 75% of pasture/hay is grazed at some point in time, and the remaining 25% is cut for hay. It was noted that much of the cropland in the watershed is leased (e.g. the Timberbought farm) but that most of the pasture with cattle is operated by the owner. Many of the farms in the watershed have farm managers, particularly the larger operations. It was also noted that most of the larger farms have implemented BMPs and have conservation easements in place. Some of the smaller operations are the ones that need the most help.

The group discussed the best ways to get the word out about conservation programs to local farmers and farm managers. The Fluvanna Farm Bureau was noted as a good group to work with on outreach. They have an annual membership meeting, produce two newsletters a year, and hold monthly board meetings. The closest chapter of the Cattleman's Association is in Louisa, but includes Albemarle and Fluvanna Counties as well. They could be a good group to work with on outreach too. Charles Rossan was identified as the best contact there. The group discussed a few different opportunities to conduct outreach at ongoing Farm Bureau events including an annual safety day (held in Orange this year), and field days in August and October. Representatives from the Thomas Jefferson SWCD noted that they have had the best success with outreach events when they partner with Cooperative Extension and the Farm Bureau. Nesha asked whether it might be possible to circulate a survey at one of the regular

Fluvanna Farm Bureau meetings to try to collect some more information for this project. She will follow up with Claudia Goin on this possibility. Nesha also said that she would be willing to come and present at the annual meeting or prepare some information for inclusion in one to the newsletters.

In order to gauge local interest in different BMP options and identify the most suitable livestock exclusion fencing systems for inclusion in the plan, a survey was distributed to meeting participants. Everyone was asked to rank a series of BMPs along with a series of obstacles to livestock exclusion. The results are summarized in the two tables below:

**Table 1. Potential best management practices for consideration.** Average rankings are shown below (7 total) with 1 being the highest priority practice and 7 being the very lowest priority.

Best management practice	Description	Rank (1-7)
Streamside livestock exclusion fencing	Excluding livestock from streams with fencing, providing alternative water sources or limited access points to the stream	1
Rotational grazing	Establishing a series of grazing paddocks with cross fencing and rotating livestock to maximize forage production while preventing overgrazing	2
Forested streamside buffers	Planting trees and shrubs in strips (35 foot minimum) along streams adjacent to pasture and cropland	3
Grassed streamside buffers	Planting grasses in strips (35 foot minimum) along streams adjacent to pasture and cropland	3
Forestation of crop, pasture or hayland	Convert existing pasture, crop or hayland to forest (hardwood or conifers,	5
Continuous no-till	Cropland is planted and maintained using no-till methods, only effective in reducing bacteria for cropland receiving manure applications (not commercial fertilizer)	4
Manure composting/storage facilities (equine)	Construction of planned system designed to manage solid equine waste from areas where horses are concentrated either through composting or storage	4

**Table 2. Obstacles to streamside livestock exclusion.** Average rankings are shown below (5 total) with 1 being the most common obstacle to address and 5 being the least common obstacle.

Obstacle	Rank (1-5)
The cost of installing fencing and off stream water is too high, even with cost share assistance from federal and state programs	4
Cannot afford to give up the land for a 35 foot buffer	3
General maintenance of fencing is time consuming and expensive	2
Grazing land is rented with short term leases and landowners are not interested in installing and/or maintaining streamside fencing and off stream water	5
People do not trust the government and do not want to work through state and federal cost share programs to installing fencing systems	1

Nesha asked the group about other potential meeting locations in the watershed for the future. She explained that the two groups from the Scottsville and North Garden public meetings would be brought together for one or two more agricultural working group meetings over the next several months. Walton Middle School was suggested as a good location for a meeting. Nesha asked the group about good times/days of the week to meet. Participants felt that Tuesdays worked well and asked to meet at 7:00 rather than 6:30 p.m. Nesha thanked everyone for their participation and the meeting adjourned.

**Hardware River Water Quality Improvement Plan**  
Residential Working Group Meeting: Victory Hall, Scottsville VA  
March 31, 2015

***PARTICIPANTS***

Carol Owen	Jim Bonner	Jack Witt
Ruth Witt	George Cushnie	Eugene Goin
Roger Black	Handwriting unclear	Tara Sieber (VADEQ)
Luke Longanecker (TJSWCD)		

***MEETING SUMMARY***

Tara Sieber, from the Virginia Department of Environmental Quality (VADEQ) provided an overview of the role of the residential working group in the planning process. She explained that the group is typically made up of local residential property owners, local Health Department staff, and representatives from other interested citizens groups in the region. The group moved on to discuss septic system maintenance needs and the degree of awareness in the area regarding what is involved in maintaining these systems. The group agreed that there is a considerable lack of awareness, with many property owners unable to tell you where their tank is actually located.

One participant noted that it does not seem like there are many houses located along the river going from the Route 6 bridge down to the James River. In addition, there are not many livestock along this reach of the river (around 10 miles). It was suggested that far more of the bacteria in the river is coming from the Albemarle County portion of the watershed up towards the headwaters. Another participant commented that the lower Hardware should be broken out into two different portions (Albemarle and Fluvanna) when developing the plan due to the different characteristics of these areas.

Septic tank pumpout programs have been used to raise awareness of maintenance needs in other regions, where some degree of assistance is provided with this regular maintenance through grant programs. The group thought that this might be applicable in the watershed, but was unsure about any sort of targeting strategies such as focusing on homes within a certain distance of the stream or particular subwatersheds. One participant shared their experiences living in the tidal portion of Virginia, where pumpouts were required when any transfer of a property occurred. They thought that this was helpful in encouraging property owners to maintain their systems. It was noted that Fairfax County requires a pumpout with transfers of property as well. Due to the clay soils that are present in much of Fluvanna County, many thought that there would not be much development in the area since these soils typically don't perk. However, alternative waste treatment systems have allowed for development in areas with the soils in the county. It was suggested that a handout with maintenance information on septic systems be developed and made available to local landowners at places like the local library in Palmyra. The county Cooperative Extension Service office would be another good place to leave educational materials.

The group discussed the estimated number of straight pipes in the TMDL study. A representative from the Health Department said that these numbers seemed too high to him and asked if grey water

discharges were considered straight pipes in the TMDL. Another participant suggested that localities should work with the Health Department to require that a property owner have a working septic system in order to receive a building permit. This would also be a good way of tracking failing septic systems and straight pipes.

The group discussed the use of alternative waste treatment systems in the watersheds. There are quite a few these days and people don't have a clear understanding of how they work and the maintenance that is involved. The Health Department should have records of these systems. There are required inspections and an operation and maintenance manual that must be followed in cases where these systems are used now.

Tara asked the group about opportunities to connect homes with failing septic systems or straight pipes to public sewer. The group did not think that many opportunities existed. It was noted that there may be some possibilities for connections to sewer along Route 53 heading up from Palmyra, but participants were unsure. One participant asked how schools are treating their waste (are they on public sewer).

The group discussed opportunities for pet waste outreach in the region in order to address bacteria getting in to the creeks when people do not properly dispose of pet waste. The group agreed that there are not many opportunities for an outreach program due to the rural nature of the watershed. Walnut Creek Reservoir was identified as a place where people walk their dogs, but it is not heavily used for this purpose. One participant noted that there are a number of horse trails in the watershed, and suggested that owners/riders could be encouraged to address trail manure. There are also quite a few stables in the watershed where manure could be an issue with respect to runoff into the creeks.

Luke Longanecker (Thomas Jefferson SWCD) shared a few of his experiences working in the Rockfish River watershed in nearby Nelson County to address failing septic systems and straight pipes. A water quality improvement plan was recently developed by the Department of Environmental Quality for this watershed, and Luke is working with local landowners to implement BMPs in the watershed through a series of incentive based assistance programs. Luke noted that the program has been very successful in the Rockfish and that a number of failing septic systems have been either repaired or replaced. In addition, three straight pipes have been corrected to date.

Tara asked the group if there was a good central location in the watershed for future meetings. Local churches, schools and the rescue squad were suggested. A few schools were noted including Yancey in Esmont, Scottsville Elementary and Walton Middle School. The group felt that Tuesday evenings were the best time to meet. Tara thanked participants and the meeting was adjourned.